UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,935	02/06/2001	Bill Smith	0512-033P/JAB	9794

22831 7590 10/04/2004

SCHWEITZER CORNMAN GROSS & BONDELL LLP
292 MADISON AVENUE - 19th FLOOR
NEW YORK, NY 10017

EXAMINER	
DAVIS, CYNTHIA L	

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/777,935	SMITH, BILL	
	Examiner	Art Unit	
	Cynthia L Davis	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 February 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/11/2001*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 7 is objected to because of the following informalities: in line 2, "unit" should be changed to "units". Also, in line 3, "unit" should be changed to "units". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. While the presence of LOS signals is disclosed in the specification on page 15, lines 10-18 as being the indicator of an intermediate unit, no mention is made anywhere in the specification of the presence of two LOS signals.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 12 and 15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Cree (5276442).

Regarding claim 12, a method for forcing an outcome choice between competing devices coupled together in a network is disclosed in Cree, column 4, lines 14-27. Assigning a value to each of the competing devices is disclosed in column 4, lines 16-17. Comparing the values and reassigning the values for all of the competing devices until the values are different is disclosed in column 4, lines 19-21. Choosing one of the values and designating the competing device having the chosen value as the chosen unit is disclosed in column 4, lines 10-13 (messages intended for a particular node are sent using that node's chosen address).

Regarding claim 15, the steps of the method being performed on a continuing basis to accommodate changes to the number of competing devices in the network is disclosed in Cree, column 4, lines 24-27.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 5-11, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cree in view of Lumbis and Ghaffari.

Regarding claim 1, assigning an identifier to each of the end units is disclosed in Cree, column 4, lines 16-17. Comparing the identifiers and reassigning identifiers if

they are the same is disclosed in Cree, column 4, lines 19-21. Claim 1 further specifies the individual units being connected in a series system having first and second end units and a variable number of intermediate units, and identifying each of the communication units as an end unit or non-end unit, which is missing from Cree. This is disclosed in Lumbis, figure 1 (units in series on train cars), and column 6, lines 8-10 (describing the qualifications for an end unit). It would have been obvious to one skilled in the art at the time of the invention to use the method of assigning identifiers disclosed in Cree in the serial system of Lumbis. The motivation would be to have a decentralized way of assigning identifiers in a serial system, so as not to be dependent on a central controller. Claim 1 also further specifies generating the timing and synch signals by the end unit having a particular identification code and passing the signals to the other individual units in the system, which is also missing from Cree and Lumbis. This is disclosed in Ghaffari, column 2, lines 44-48 (the designated master unit transmit the synch signals). It would have been obvious to one skilled in the art to designate one of the nodes in the serial system of Lumbis to generate the timing and synch signals. The motivation would be to use a known method of synchronizing a group of devices.

Regarding claim 2, the method of claim 1 is disclosed in Cree is view of Lumbis and Ghafarri. Claim 2 further specifies the communication units being identified as an end or non-end unit by consideration of internally generated signals, which is missing from Cree. However, this is disclosed in Lumbis, column 6, lines 8-10 (the output of the sensor is internally generated). It would have been obvious to one skilled in the art at

the time of the invention to identify the units based on internally generated signals. The motivation would be to have the units do the identification themselves.

Regarding claim 5, the identifier being assigned in a random manner is disclosed in Cree, column 4, lines 16-17.

Regarding claim 6, the method of claim 5 is disclosed in Cree is view of Lumbis and Ghafarri. Claim 6 further specifies the identifier being one of two possible values, which is not specifically disclosed in Cree, Lumbis, or Ghafarri. However, Cree discloses in column 8, lines 13-19, ensuring that a randomly selected address have at least a 50 probability of being unique, so as to reduce address conflicts. The instant invention will only ever have two nodes (the two ends) selecting identifiers. In light of this disclosure, it would have been obvious to one skilled in the art at the time of the invention to have the identifier be one of two possible values. The motivation would be to ensure that the two nodes have a 50% chance of choosing unique addresses, thereby limiting identifier conflicts.

Regarding claim 7, the step of comparing the identifiers comprising the steps of passing the identifier associated with each of the end units to the other end units and comparing the codes at each end unit is disclosed in Cree, column 4, lines 17-19 (the nodes broadcast their identifiers to each other to see if they are the same).

Regarding claim 8, randomly reassigning an identifier to each of the end units if the identifiers are the same is disclosed in Cree, column 4, lines 19-21.

Regarding claim 9, the step of generating system timing codes comprising enabling a free-run oscillator in the communications unit having the particular identifier

is disclosed in Ghafarri, column 2, lines 44-48 and 55-56 (if the particular master unit is generating the signals itself, it must be doing it in free-run mode). It would have been obvious to one skilled in the art at the time of the invention to have timing codes generated by a unit in free-run mode. The motivation would be to allow the overall master unit to internally generate the signals using its internal circuitry.

Regarding claim 10, the steps being performed in a continuing manner to accommodate changes in the number of communications units in the system is disclosed in Cree, column 4, lines 24-27.

Regarding claim 11, the method of claim 1 is disclosed in Cree is view of Lumbis and Ghafarri. Claim 11 further specifies the communications units being coupled together with a master-slave relationship between framers in coupled units, which is disclosed in Ghaffari, column 2, lines 44-48 (a master unit transmits timing and synch signals to a slave unit(s); any unit that receives timing signals from another unit is that unit's slave). It would have been obvious to one skilled in the art at the time of the invention to use a master-slave setup in the serial system of Lumbis. The motivation would be to be able to pass the timing and synchronization signals from unit to unit down the serial communications network. The additional step of determining the configuration of each coupled end of each communication unit by referencing the presence of end or non-end identification and the presence or non-presence of an identification code for each communications unit is disclosed in Lumbis, column 2, lines 12-14, column 6, lines 8-12, and figure 1, EOT element (the presence or non-presence

of a certain parameter determines end-node status; the end node is configured differently from the others).

Regarding claim 13, each value being assigned to each competing device randomly is disclosed in Cree, column 4, lines 16-17.

Regarding claim 14, the method of claim 11 is disclosed in Cree in view of Lumbis and Ghafarri. Claim 14 further specifies the number of available values to be assigned to the competing devices being equal to the number of competing devices, which is not specifically disclosed in Cree, Lumbis, or Ghafarri. However, Cree discloses in column 8, lines 13-19, ensuring that the randomly selected address have at least a 50 probability of being unique, so as to reduce address conflicts. The instant invention will only ever have two nodes (the two ends) in contention. Having two nodes selecting between two possible identifiers gives a 50% probability of identifier conflict. In light of this disclosure, it would have been obvious to one skilled in the art at the time of the invention to have the number of available values to be assigned to the competing devices be equal to the number of competing devices. The motivation would be to ensure that the two nodes have a 50% chance of choosing unique addresses, thereby limiting identifier conflicts.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cree in view of Lumbis and Ghafarri, in further view of Kight. The method of claim 2 is disclosed in Cree in view of Lumbis and Ghafarri. Claim 3 further specifies the internally generated signals being LOS signals, which is missing from Cree, Lumbis and Ghafarri. However, Kight discloses in column 6, lines 20-29, a system that generates a LOS

signal when there is no other signal present. It would have been obvious to one skilled in the art at the time of the invention to use LOS signals for the internally generated signals that determine whether the units are end or non-end. The motivation would be to use the lack of a signal (i.e., the presence of a connection to another signal-generating unit) to determine if a unit was connected to another unit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLD
9/28/2004
CLD 9/28/04

10/1/04

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600